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Boeing Procurement in Canada

POLICY AND ACTIVITIES

1967

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POLICY AND ACTIVITIES

Thru June 1967



CONTENTS

INTRODUCTION

FOREWORD

INTRODUCTION TO THE BOEING COMPANY

REPORT

PART I BOEING PROCUREMENT POLICY

PART II PRINCIPLES OF AERO-SPACE PROCUREMENT

PART III INDUSTRIAL SOURCE DEVELOPMENT

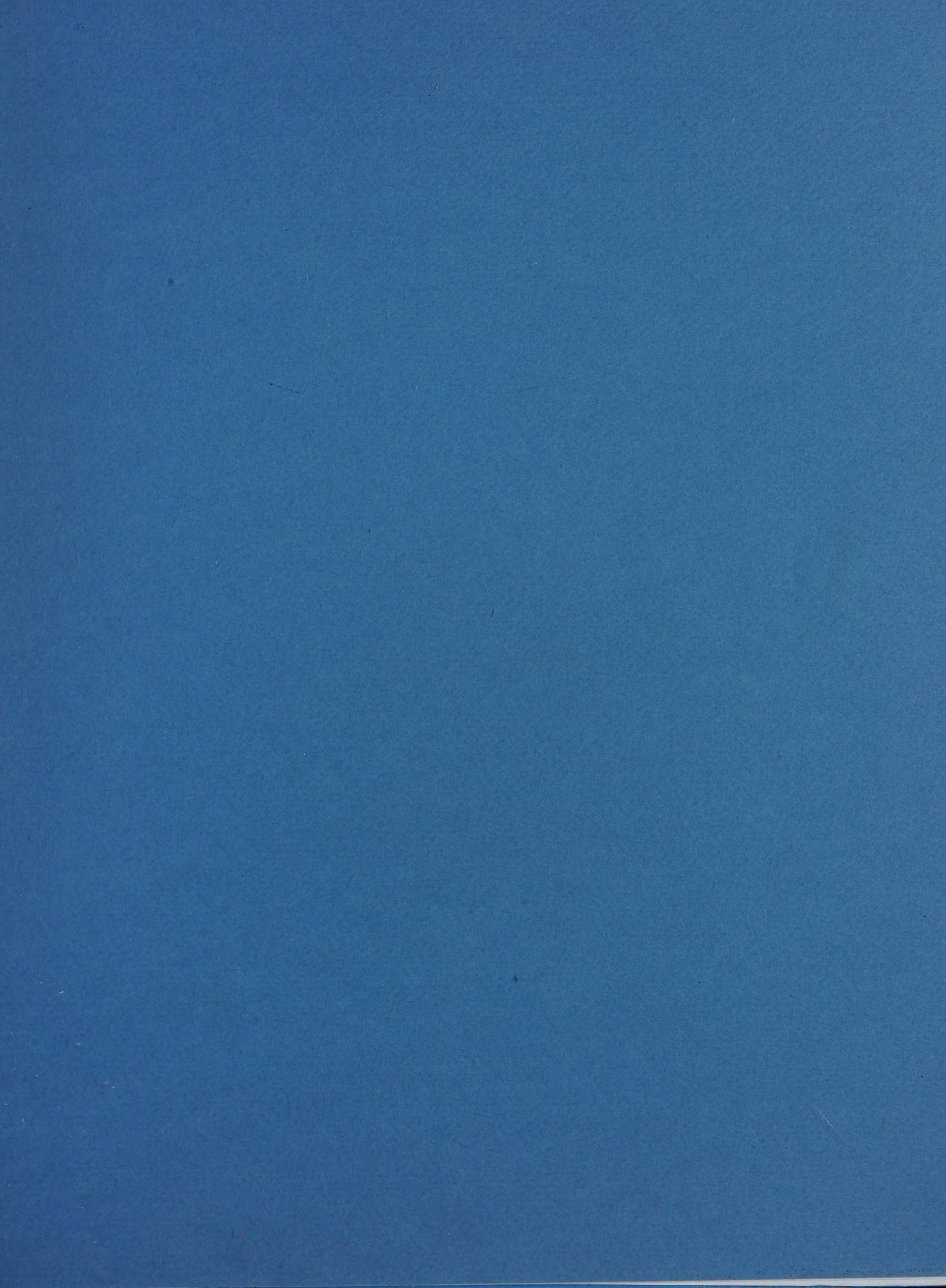
PART IV SUMMARY OF PURCHASING ACTIVITIES

PART V CONCLUSION

APPENDIX

ILLUSTRATIONS

LIST OF SUPPLIERS





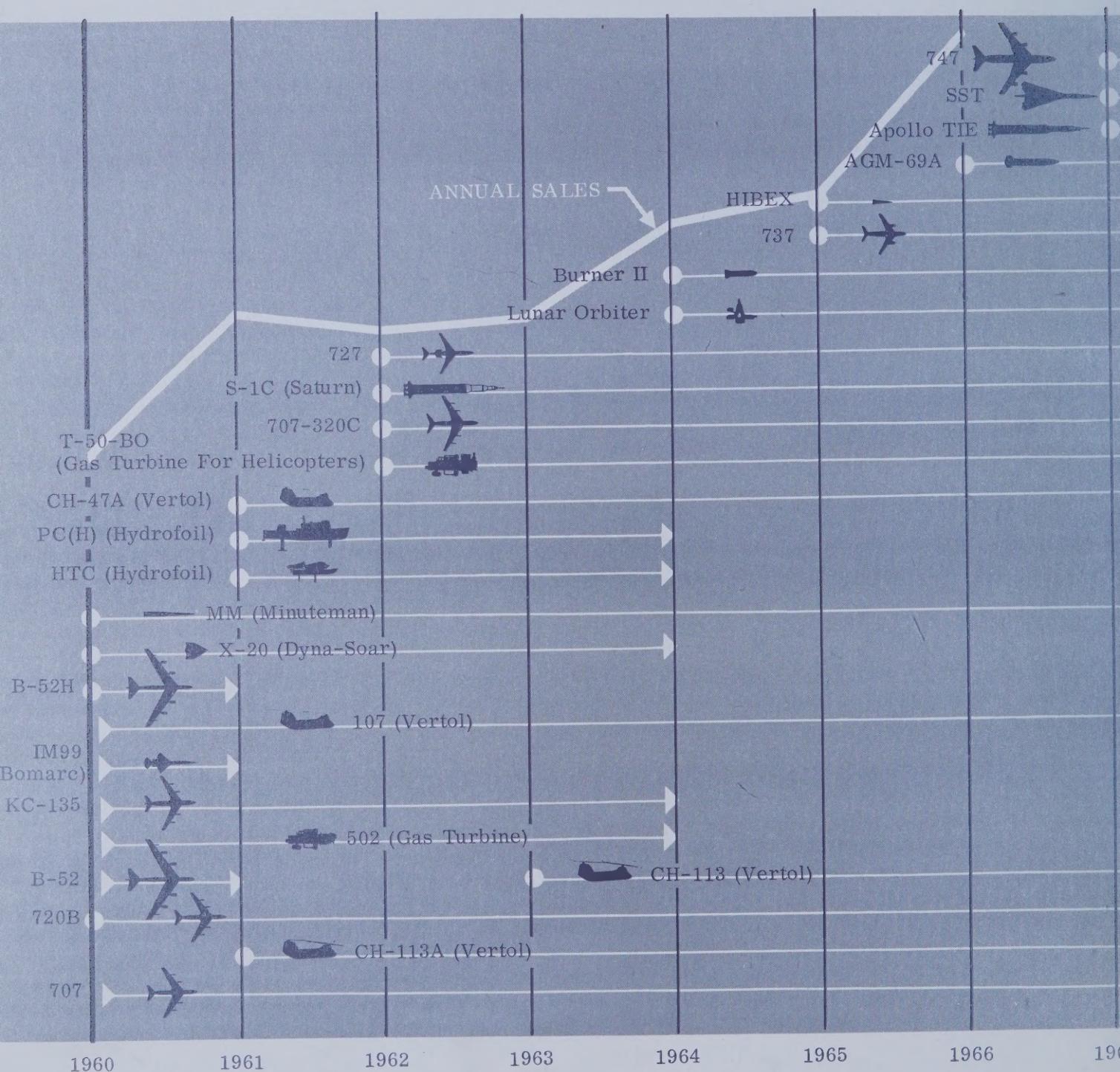
FOREWORD

Canada is a valuable potential source of supply for aerospace and airplane manufacture. Recognizing this, The Boeing Company has sought, in recent years, to apply Canadian capability to its growing needs. Its procurement interest has attracted many Canadian producers, with whom Boeing now enjoys a mutually beneficial relationship.

The same policy will be continued, and it is believed that increasing numbers of manufacturers in Canada will participate in Boeing procurement.

The purpose of this booklet is to inform Canadian businessmen of the nature and extent of Boeing's purchasing program in Canada, and to encourage their participation.

BOEING GROWTH AND PRODUCT DIVERSIFICATION
FROM 1960



AN INTRODUCTION TO THE BOEING COMPANY

The Boeing Company is one of the world's major aerospace and airplane manufacturers, with a history dating back almost to the very beginning of the heavier-than-air flight.

In gross volume and product diversity, Boeing's output is growing. Current production programs include:

- Military and Commercial aircraft
- Helicopters
- Missiles and Rockets
- Spacecraft
- Gas turbine engines
- Advanced marine systems

The Company's operating facilities are nationwide. Principal production centers are at Seattle, Renton, and Everett in the State of Washington; at Wichita, Kansas; at Morton, Pennsylvania; at New Orleans, Louisiana; at Huntsville, Alabama, and at Arnprior, Ontario, Canada.

Boeing customers, in addition to a number of governments, including that of Canada, comprise fifty-one of the world's commercial airlines; plus seventeen additional airlines that have Boeing airplanes on order, including Canadian carriers.

The scope and growth of Boeing activity is outlined broadly in the accompanying chart; and many more projects are in various stages of design, research and development.

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BOEING PROCUREMENT POLICY

(ADOPTED OCTOBER 24, 1958)

"The Boeing Company will endeavor to become acquainted with the capability of Canadian industry to the extent that the same may be utilized in the same manner industrial capability in the U.S. has been and is being utilized. Procurement of parts, materials and services from Canadian sources is to be handled on a normal competitive basis."

F. L. Dobbins

Vice President - Materiel

The Company's procurement policy is based on one fundamental premise: Boeing's customer is the one whose ultimate need must be fulfilled. Whether the finished product is being built for the U.S. Government, for commercial airlines, or for other users, technological demands are high. Competitive pricing, performance to production schedules, and highest quality standards must be strictly maintained. The Boeing Company applies these standards equally in Canada and the United States.



PRINCIPLES OF AEROSPACE AND AIRPLANE PROCUREMENT

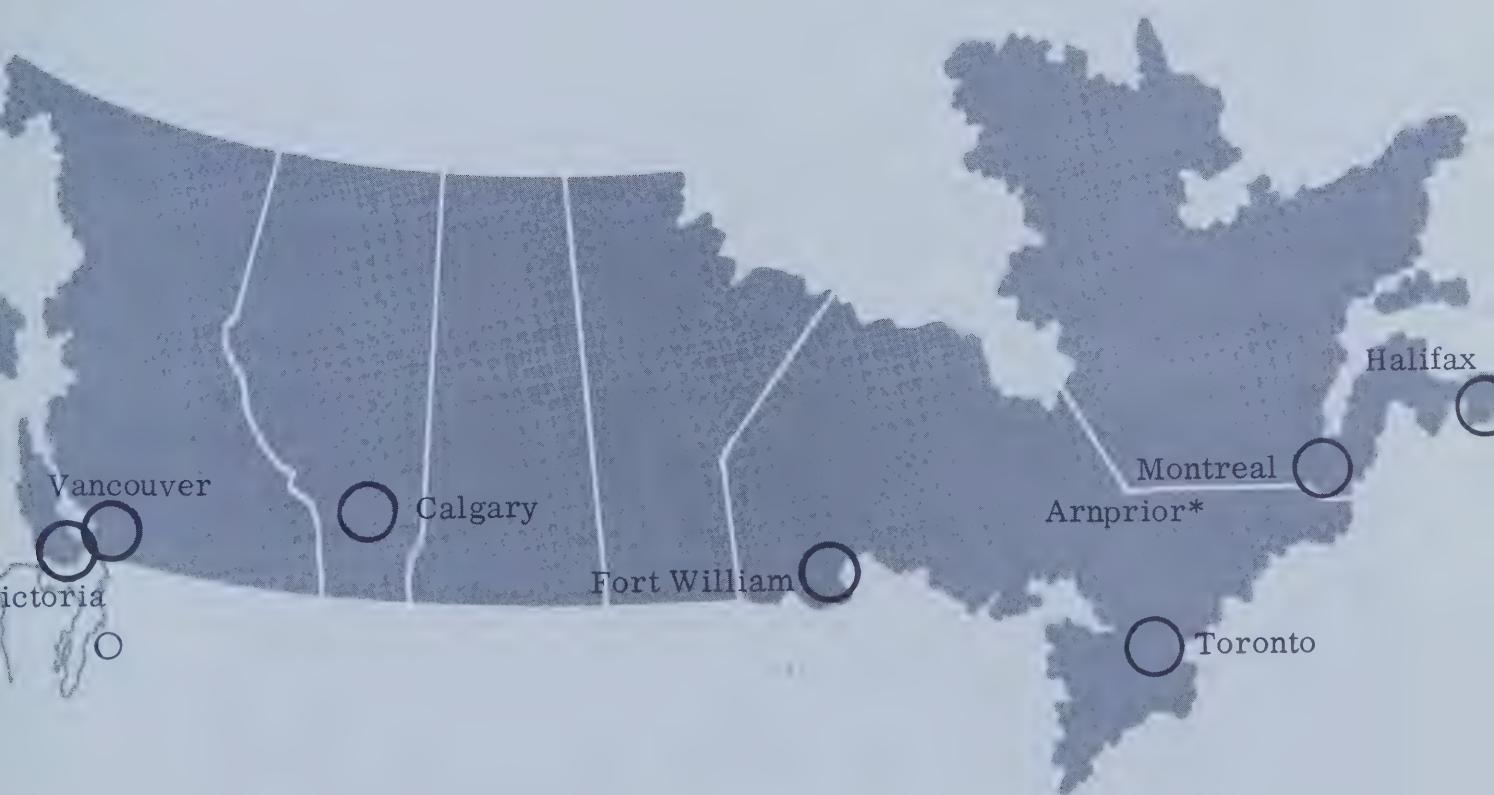
In aerospace and airplane manufacture the prime contractor must develop and maintain a broad base of suppliers.

A large proportion of the completed aerospace and airplane product cost represents parts, materials, and services purchased or subcontracted by the prime manufacturer.

Both the industry's experience and stipulations of most customers require that conditions of the highest quality, timely scheduling and economic pricing be assured through competitive buying.

In no other area of manufacturing is the impact of technological and scientific progress more pronounced than in the aerospace and airplane industry. The growing complexity of new systems, the ever increasing sophistication of performance goals and design, increased reliability and safety margin requirements impose ever-higher responsibility on both the prime contractor and his supplier-subcontractor base.

CANADIAN SOURCE AREAS SUPPLYING BOEING



* Vertol Division, Boeing of Canada Ltd.
Arnprior, Ont.

INDUSTRIAL SOURCE DEVELOPMENT

To broaden and refine its subcontract base, The Boeing Company maintains a comprehensive source development program. This encompasses search, background investigation, survey of facilities, evaluation of actual and potential capability, approval and operational instructions for buying groups.

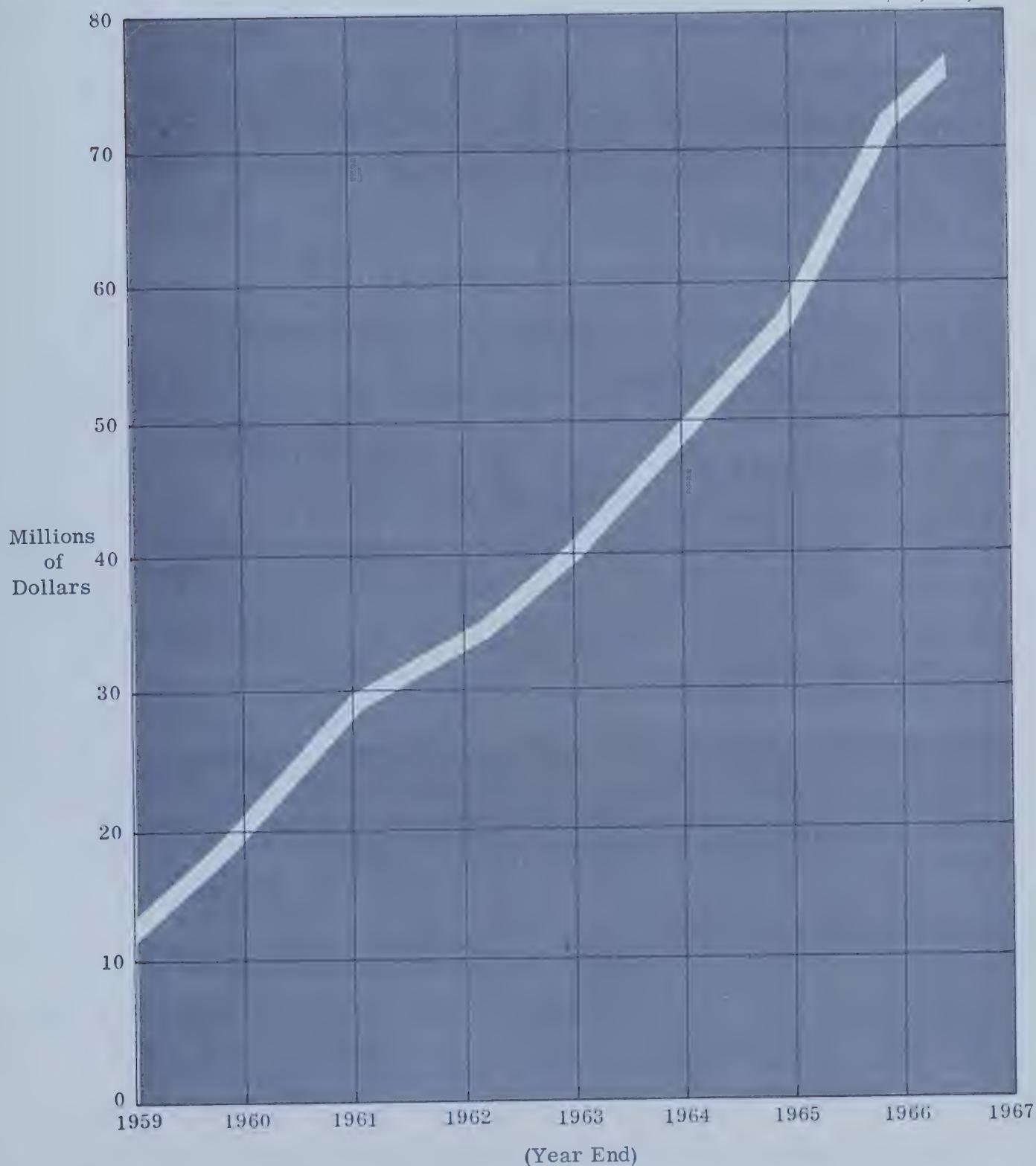
In its continuing search for qualified Canadian manufacturers, The Boeing Company has been given valuable assistance by the Department of Defence Production of Canada and by Canadian prime aircraft producers. Survey teams have called on over 300 facilities throughout the nation. These were carefully evaluated by Boeing experts in materiel, quality control, engineering, industrial engineering, and other special functions.

As part of Boeing's long-standing source development practices, call-back visits are made when production assistance is needed. Vendor support representatives advise on problems concerning management controls, engineering, production and processes, and quality control. Both Canadian and domestic firms have been drawing on these services.

COMMITMENTS TO CANADIAN VENDORS

(Cumulative)

\$75,399,144



SUMMARY OF PURCHASING ACTIVITIES

In 1958, The Boeing Company extended its procurement base into Canada by subcontracting major assemblies and parts for Bomarc. This purchasing program proved a technical and economic success. The adopted policies and program administration methods used have been retained and have been in effect since.

The effort to utilize Canadian source capability for other programs continues. The stress is now on advanced products and processes to satisfy the complex production needs of new designs.

The Boeing Company commitments to Canadian sources through June 1967 were:

1959	\$12,647,000
1960	6,702,000
1961	7,052,000
1962	5,465,000
1963	7,688,410
1964	7,706,141
1965	9,973,431
1966	15,448,675
1967 (January - June)	<u>2,716,487</u>
Total	\$75,399,144

(and
6?)

The variations in annual commitments are a reflection of the changing nature of Boeing programs. New products, as well as established products, including the 107 helicopter family, the 727 and 737 short-and-medium-range transports, the 747 jumbo jet, and the forthcoming supersonic transport prototypes contribute substantially to the business placed with Canadian sources since 1960.

MAJOR BOEING PRODUCTION LOCATIONS



Boeing procurement in Canada is varied in the product type and complexity, while the subcontractors range in size from small machining shops to integrated major industrial companies.

Through constantly seeking "the best buy" — a competitive product from the standpoint of technology, quality, cost and scheduling — satisfactory relationships with the Canadian manufacturers have been established.

Boeing's impartial approach to the Canadian supplier has resulted in placing orders for aircraft assemblies, avionics controls, landing gears, trailers, machined components, plastic components, helicopter transmissions, capital facility items, research, development, and engineering services.

These purchases have generated a proportionate second tier business for the plating, heat treatment, forging, casting, and parts industries in Canada.

The Boeing list of Canadian subcontractors is growing along with the company's knowledge of Canadian capability and with the variety of product needs. In addition, many Boeing subcontractors acquire commodities and services from Canadian firms for ultimate use in Boeing products and programs.

In the appendix are presented illustrations of some items procured in Canada, to demonstrate the complexity of structures currently produced and to show the high standards of available skills.



CONCLUSION

Since the outset of the Canadian Source Development Program in 1958, the Boeing procurement base in Canada has been firmly established. The investment in mutual knowledge has been beneficial and represents a framework for lasting business relationships in the years to come. On the basis of past performance of Canadian suppliers it is believed that as the Boeing product diversification continues and design requirements increase, Canadian capability will keep pace.

The opportunity for Canadian Industry to competitively participate in Boeing programs is extended as an invitation. Any company desiring to advise Boeing of its capabilities is cordially invited to write or telephone. Persons in Materiel to contact are listed on the following page.

■ F. L. Dobbins
Vice President, Materiel

Headquarters
The Boeing Company
Post Office Box 3707
Seattle, Washington 98124

■ L. A. Wood
Vice President -
General Manager

■ John Gronsky
Director of Materiel

Aerospace Group
The Boeing Company
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■ E. H. Boullioun
Vice President -
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■ R. W. Tilson
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Commercial Airplane Division
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■ E. A. Ochel
Vice President -
General Manager

■ G. N. Harvey, Sr.
Materiel Manager

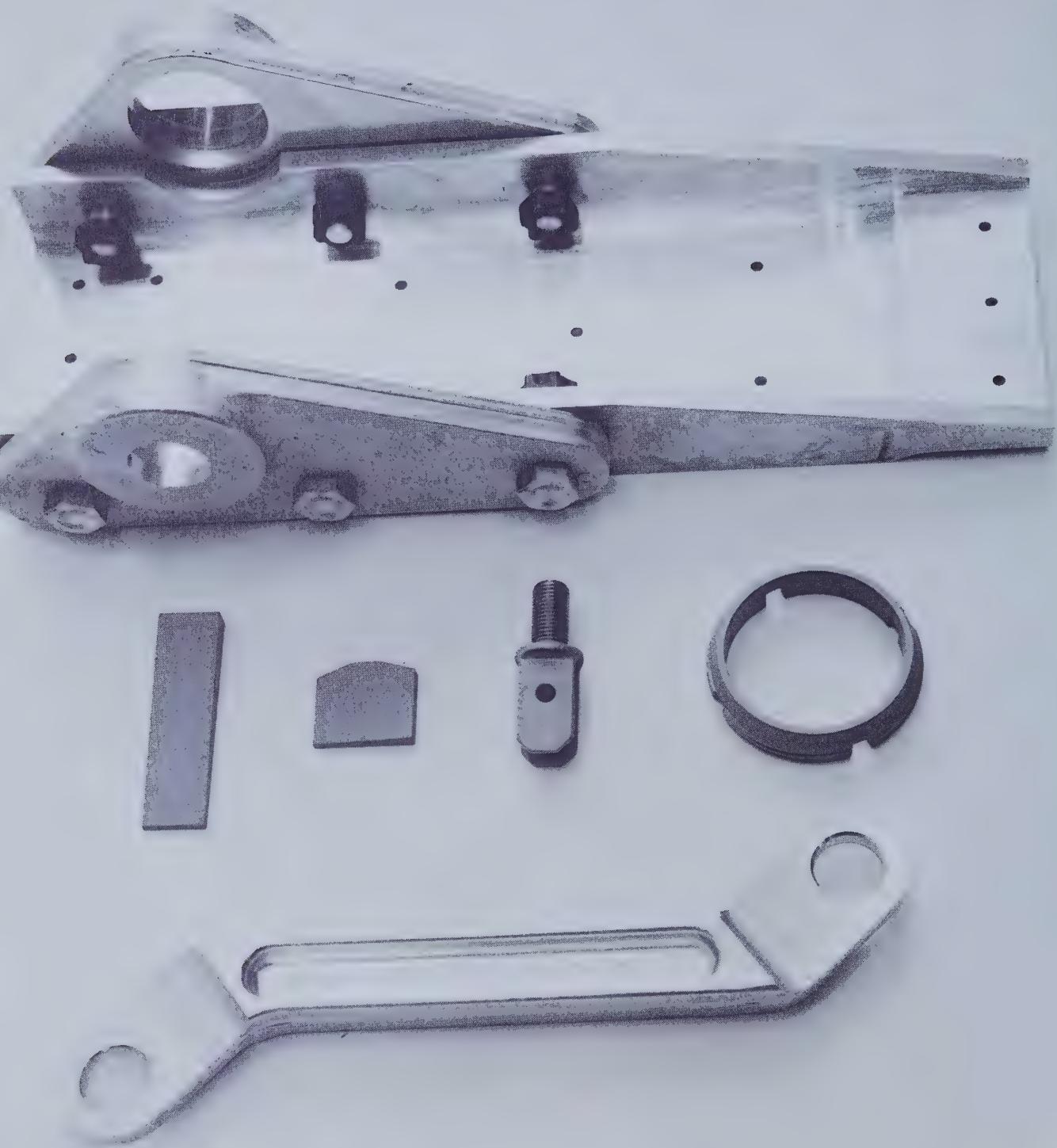
Wichita Division
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3801 South Oliver Street
Wichita, Kansas 67210

■ R. W. Tharrington
Vice President -
General Manager

■ C. J. Parrish
Director of Materiel

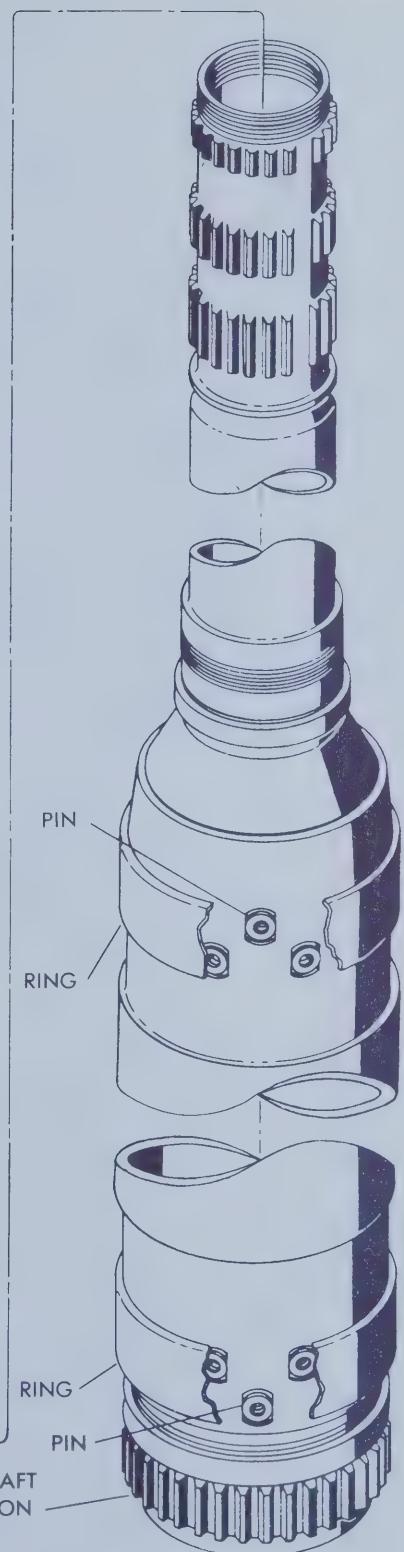
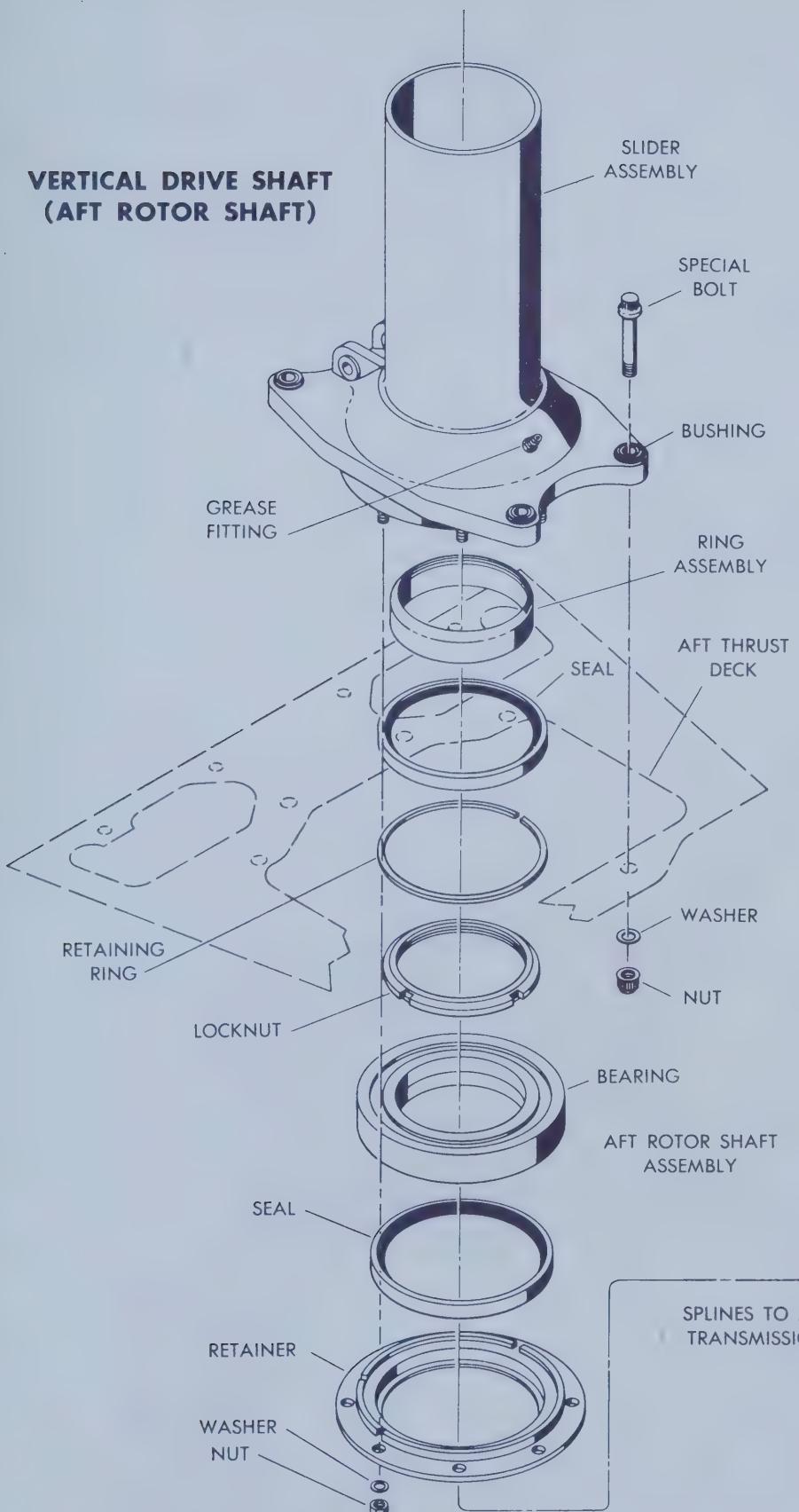
Vertol Division
The Boeing Company
100 Woodland Avenue
Morton, Pennsylvania
19070

ILLUSTRATIONS OF SOME PRODUCTS
MANUFACTURED IN CANADA
FOR
THE BOEING COMPANY

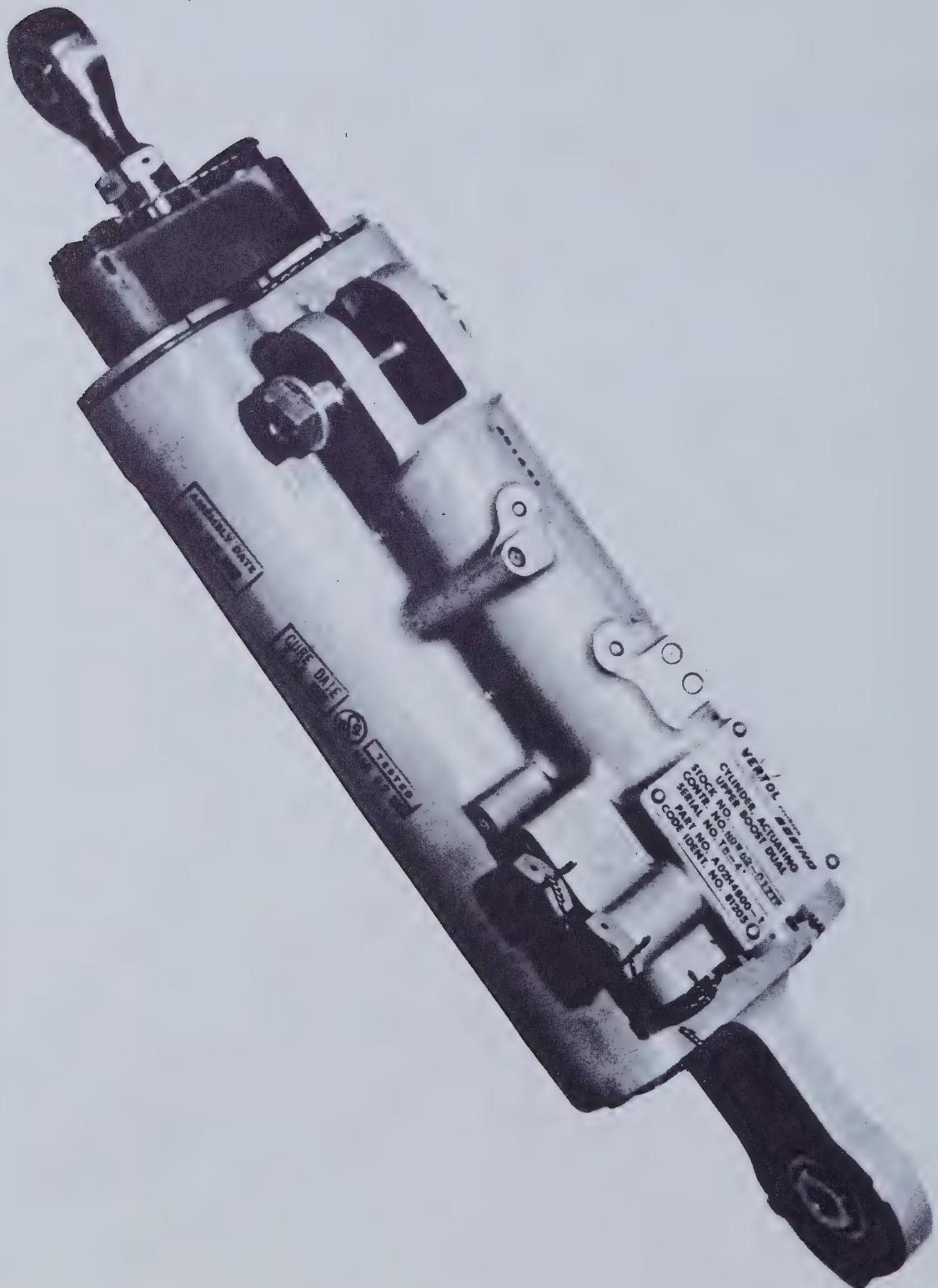


BOEING 727 EXAMPLES OF PRECISION PARTS MANUFACTURED BY
CANADIAN CAR CO., LTD. (FT. WILLIAM DIV.) AND HEROUX MACHINE PARTS LTD.

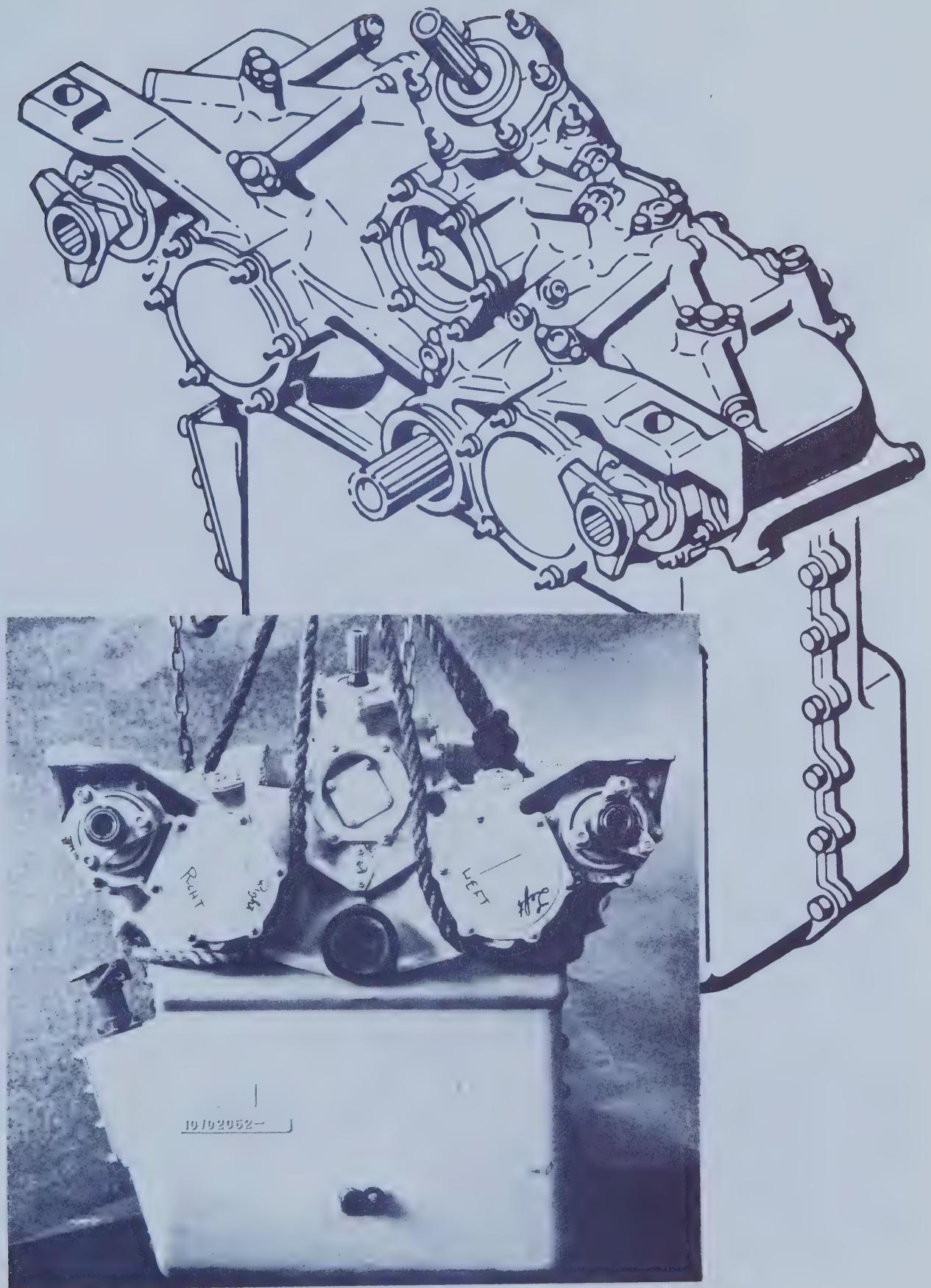
**VERTICAL DRIVE SHAFT
(AFT ROTOR SHAFT)**



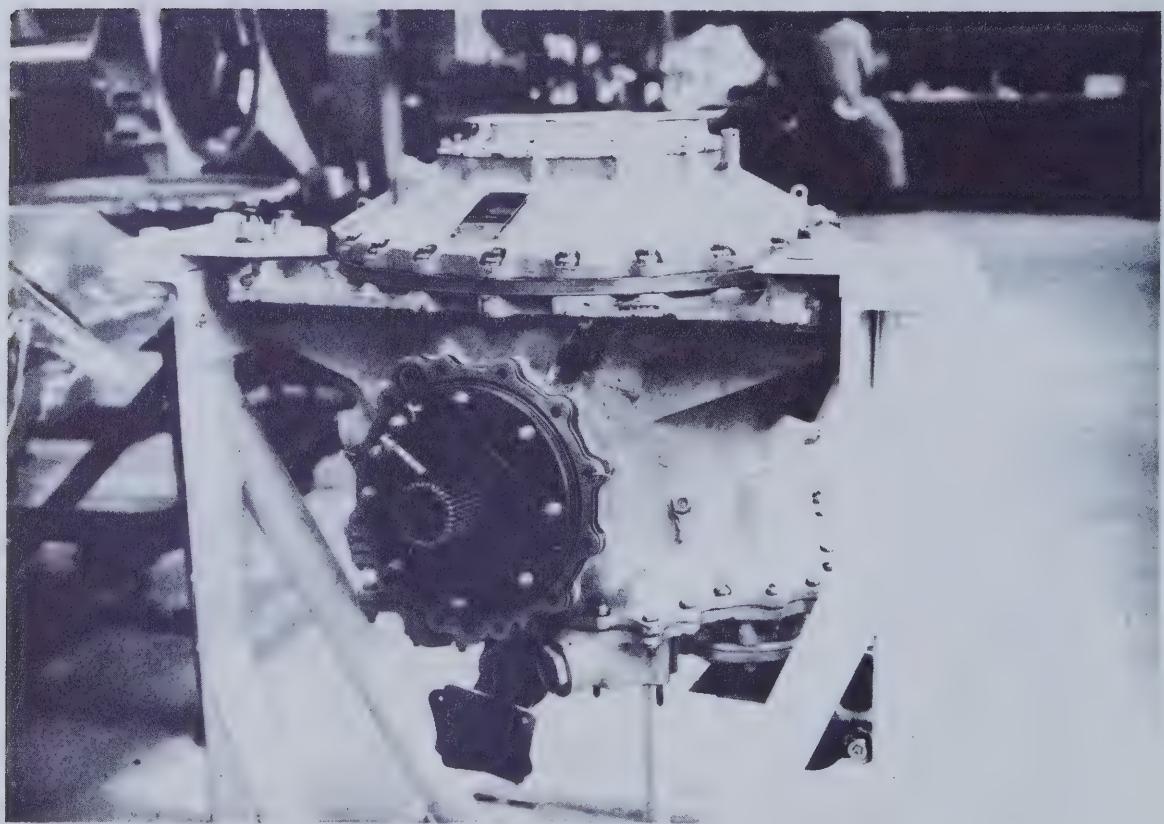
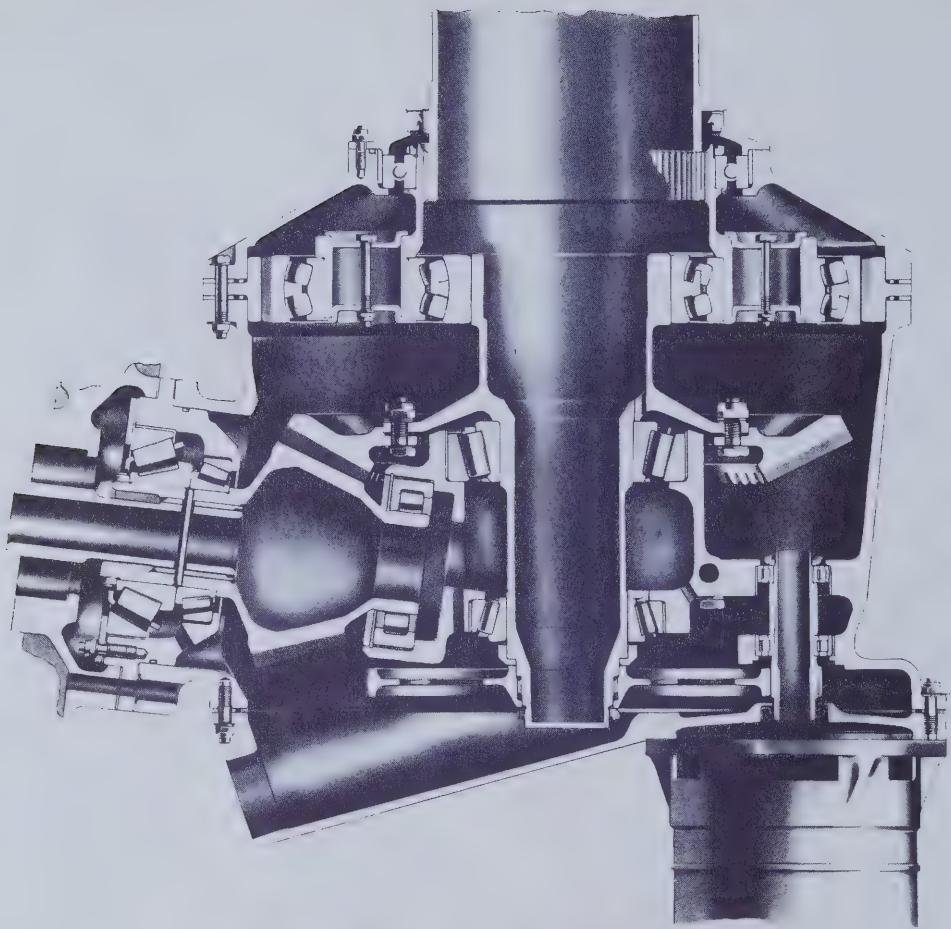
BOEING-VERTOL 107-II AFT ROTOR SHAFT
MANUFACTURED BY YORK GEARS, LTD.



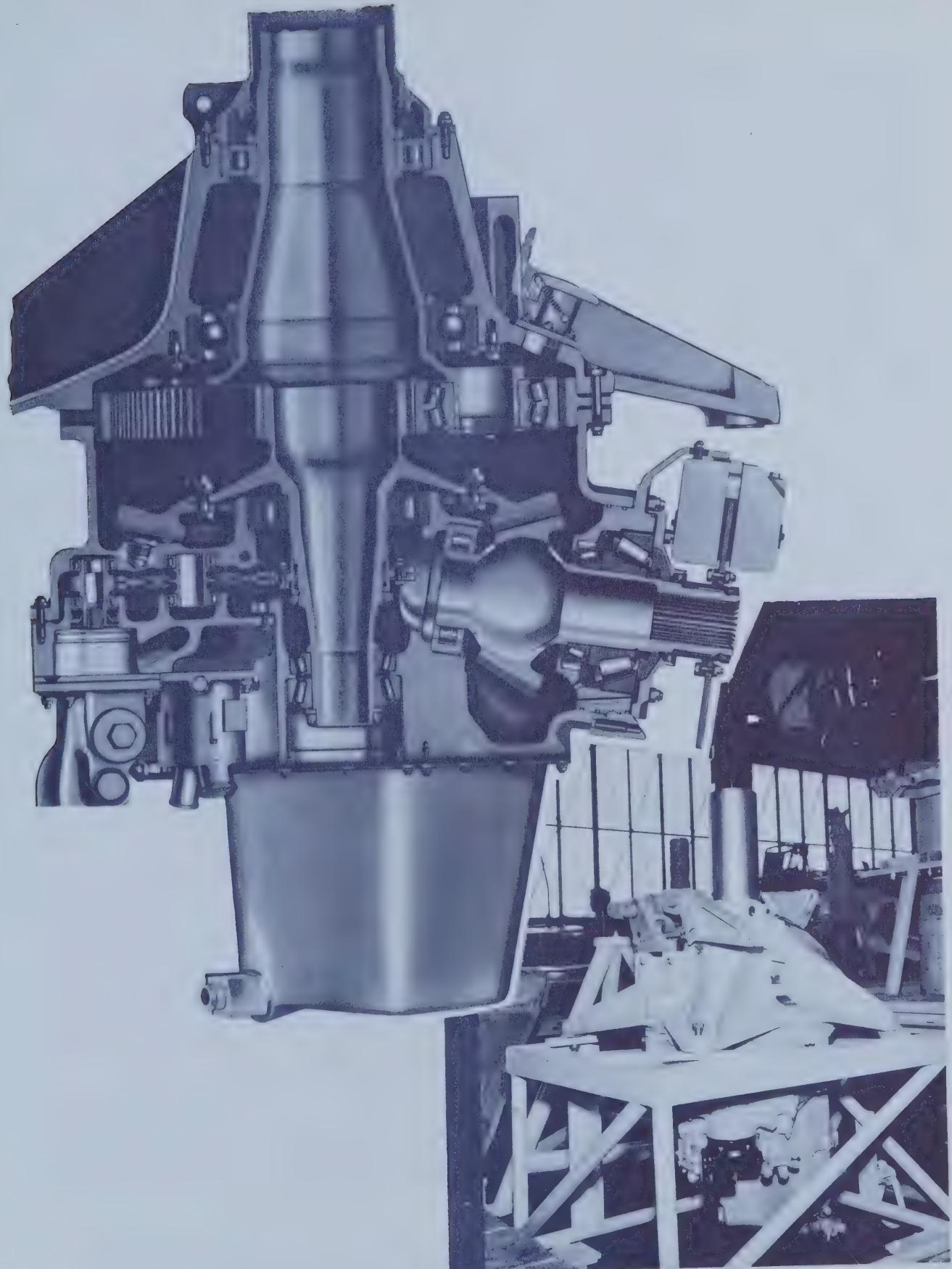
BOEING-VERTOL 107-II DUAL UPPER BOOST ACTUATORS
MANUFACTURED BY JARRY HYDRAULICS DIVISION
ABEX INDUSTRIES OF CANADA, LTD.



BOEING-VERTOL 107-II ENGINE MIX BOX
MANUFACTURED BY YORK GEARS, LTD.



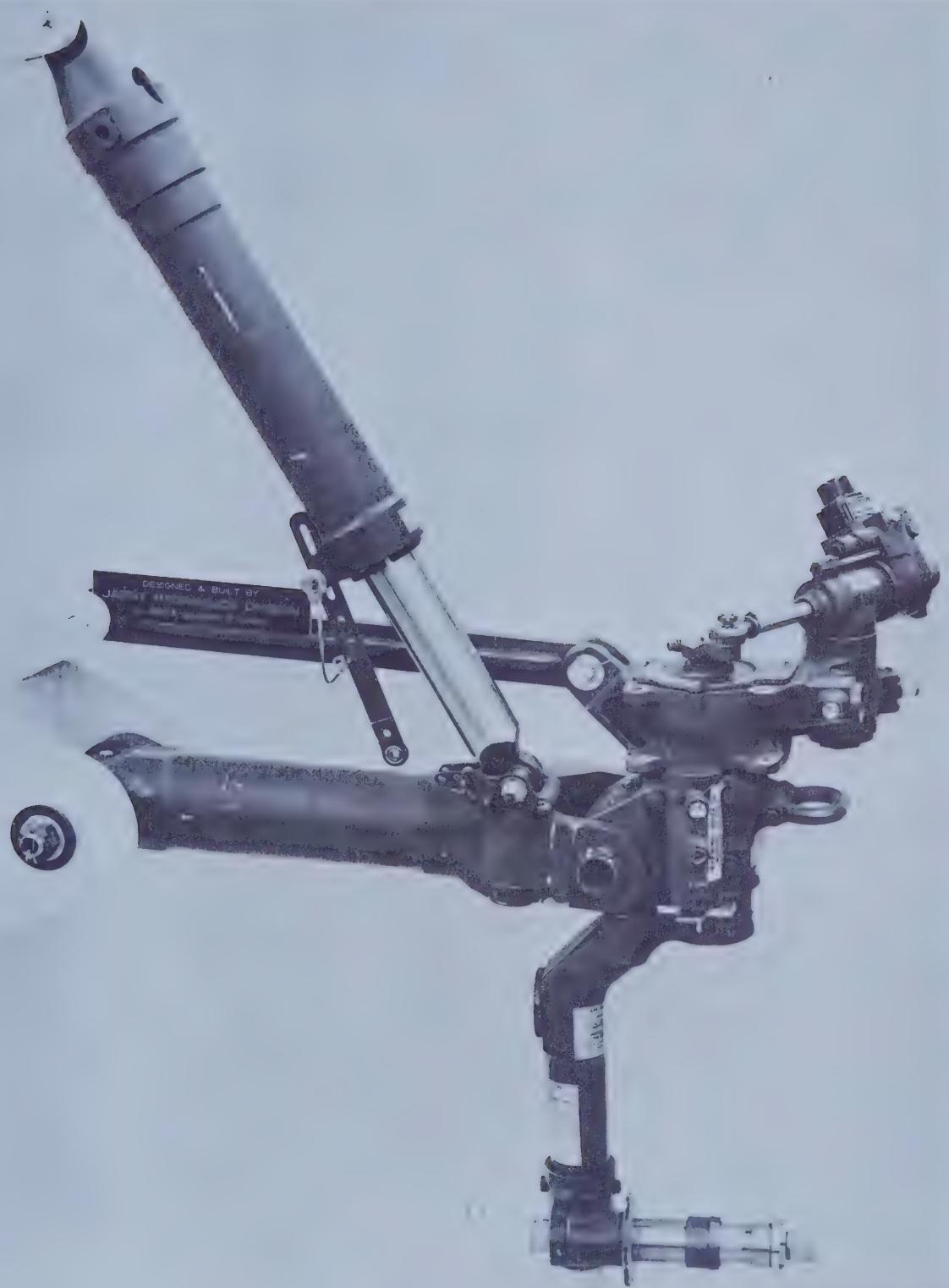
BOEING-VERTOL 107-II AFT TRANSMISSION (on stand)
MANUFACTURED BY YORK GEARS, LTD.



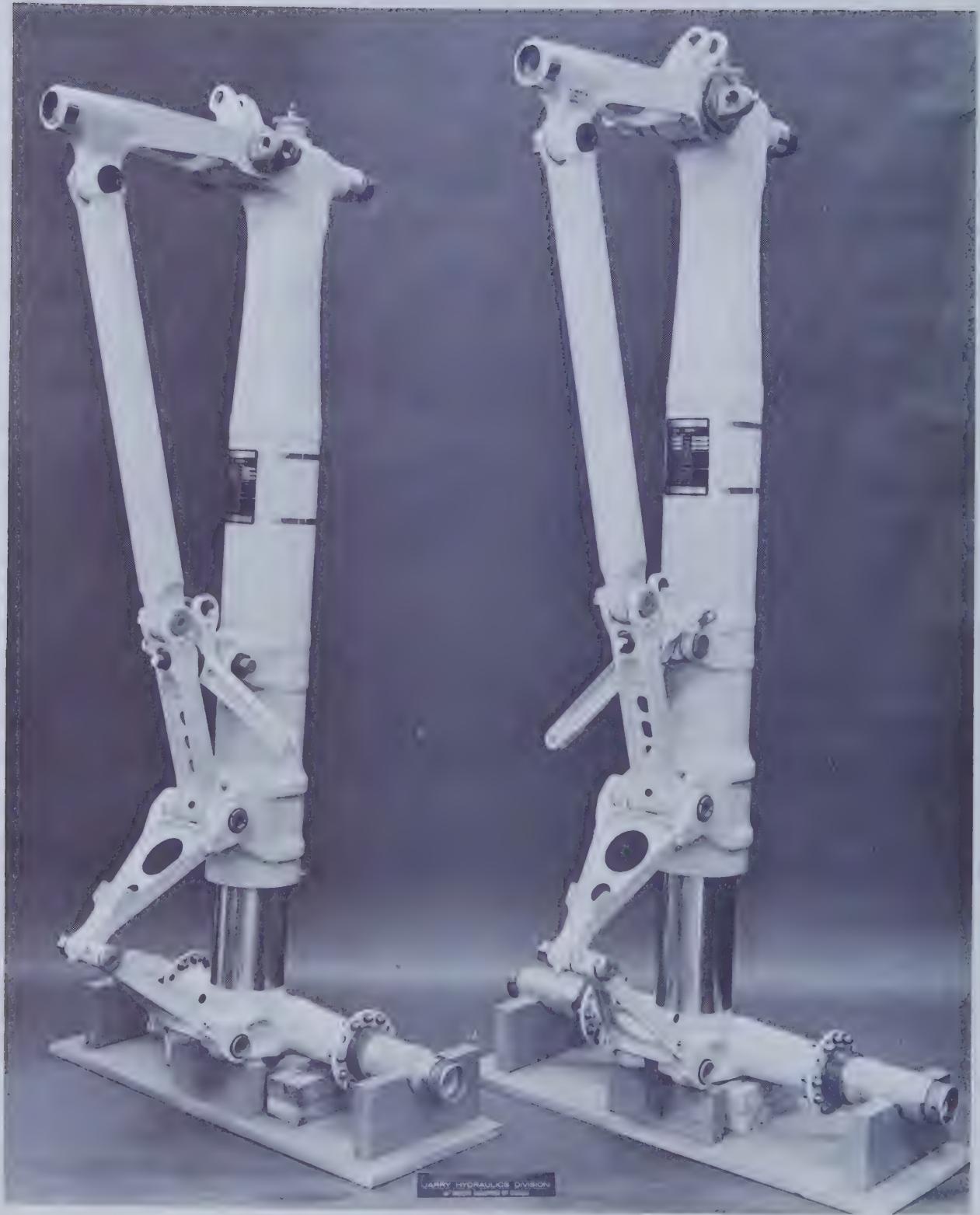
BOEING-VERTOL 107-II FORWARD TRANSMISSION (on stand)
MANUFACTURED BY YORK GEARS, LTD.



CH-47A CHINOOK FORWARD LANDING GEAR
MANUFACTURED BY JARRY HYDRAULICS DIVISION
ABEX INDUSTRIES OF CANADA, LTD.



CH-47A CHINOOK AFT LANDING GEAR
MANUFACTURED BY JARRY HYDRAULICS DIVISION
ABEX INDUSTRIES OF CANADA, LTD.



BOEING 737 MAIN LANDING GEAR
MANUFACTURED BY JARRY HYDRAULICS DIVISION
ABEX INDUSTRIES OF CANADA, LTD.



BOEING'S NEW 737 TWIN JET WHICH UTILIZES A CANADIAN FURNISHED MAIN LANDING GEAR



CANADIAN ARMY ACCEPTS CH-113A
VOYAGEUR HELICOPTER



RCAF BOEING 113 SIMULATES OCEAN RESCUE MISSION



HEAVY USE OF U.S. ARMY CH-47A CHINOOK IN VIETNAM HELPS PUSH BOEING BUILT HELICOPTER PAST 50,000 FLIGHT HOUR MARK.



USMC CH-46A SEA KNIGHTS DURING CARRIER TO SHORE OPERATIONS



The UH-46A is powered by two T-58-8 turbine engines and can cruise at 150 miles per hour. It has a 115-mile operating radius and can carry a 4000-pound load. Its watertight hull permits water landings and take-offs.



THE U.S. ARMY'S CH-47A CHINOOK MEDIUM TRANSPORT HELICOPTER



A PARTIAL LIST OF
CANADIAN SUPPLIERS OF THE BOEING COMPANY

ABEX INDUSTRIES OF CANADA, LTD.	Forward and aft landing gears, hydraulic actuators
ATLAS TITANIUM, LTD.	Titanium raw materials
ALUMINUM COMPANY OF CANADA*	Materials
JOHN BERTRAM COMPANY	Tools and transmission test stands
BOEING OF CANADA	Overhaul helicopters
BOW STEEL DISTRIBUTORS OF CANADA, LTD.	Steel bar
CANADAIR, LTD.	Aircraft and missile structure and engineering services
CANADIAN ACME SCREW & GEAR	Fasteners
CANADIAN CAR CO., FT. WILLIAM	Machining and assemblies
CANADIAN MARCONI CO., LTD.	Tracker units
CANADIAN STEEL IMPROVEMENT*	Forgings
CANNON ELECTRIC CANADA, LTD.	Connectors
CROSSMAN MACHINERY CO., LTD.	Capital equipment
DOWTY EQUIPMENT	Hydraulics
ENAMEL & HEATING	Heat treating
FAIREY CANADA, LTD.	Tooling
GARRETT MFG. (CANADA), LTD.	Avionics
HAWKER-SIDDELEY CANADA, LTD.	Couplings
HEROUX MACHINE PARTS	Machining assemblies, actuators, and wedges

JARRY HYDRAULICS DIVISION, ABEX INDUSTRIES OF CANADA, LTD.	Forward and aft landing gears, hydraulic actuators
LA SALLE ENGINEERING	Machining
LIGHT ALLOYS, HALEY	Castings
LITTON SYSTEMS CANADA, LTD.	Air Conditioning equipment and avionics
ROBERT MITCHELL CO., LTD.*	Castings
ROLLS ROYCE OF CANADA, LTD.	Engine coupling
R. C. MACHINE SHOP, LTD.	Machining
SMITH, S. AND SONS CANADA, LTD.	Navigation instruments
SPERRY GYROSCOPE OF CANADA, LTD.	Spare parts
VICTORIA MACHINERY DEPOT CO., LTD.	Pressure vessels
YORK GEARS, LTD.	Engine mix boxes, aft and forward transmissions, rotor shafts

* Significant second tier Canadian suppliers.

